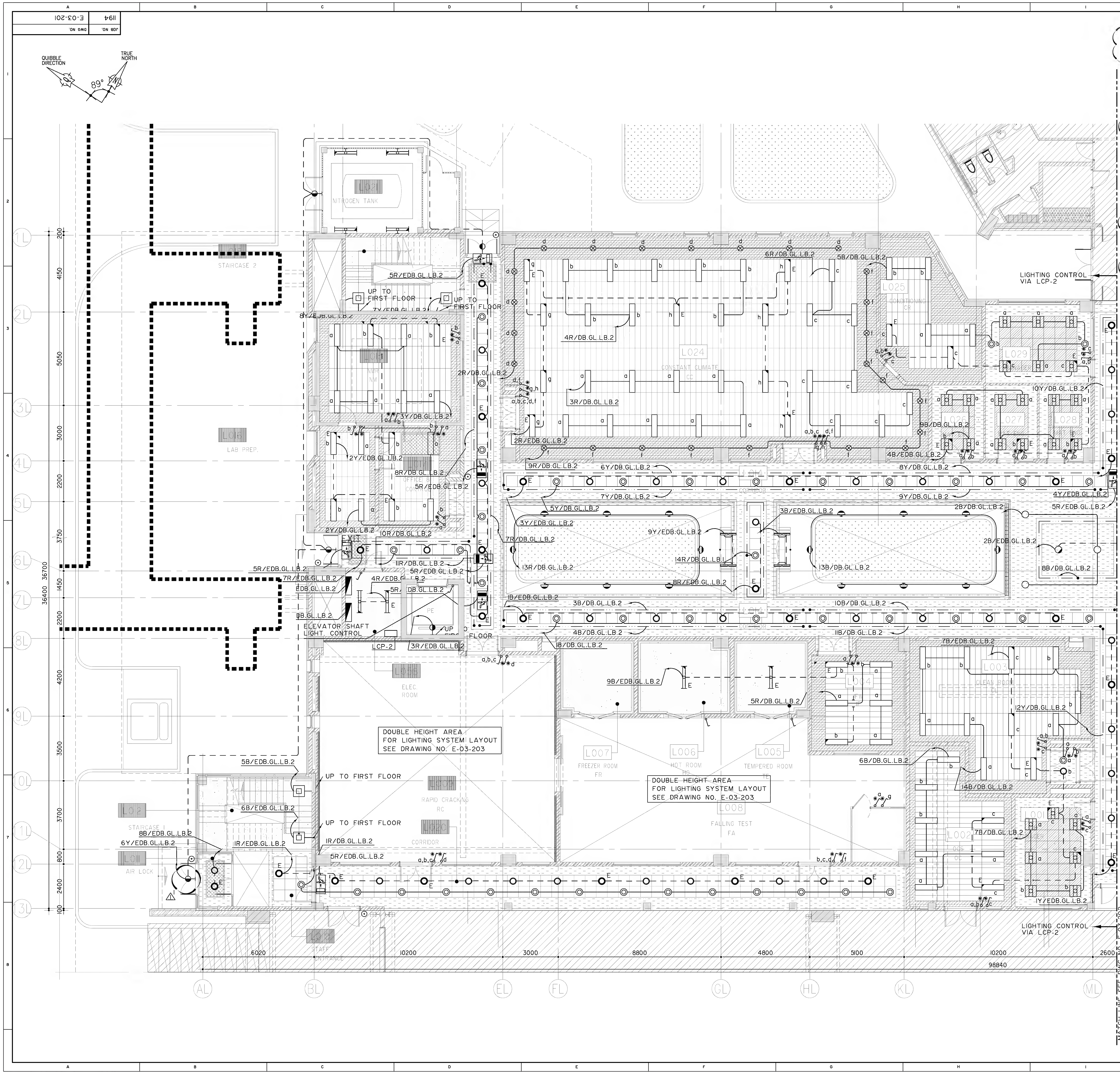


NOTES:

1-LIGHTING CONTROL IN VARIOUS AREAS SHALL BE DONE THROUGH BUILDING MANAGEMENT SYSTEM BY MEANS OF INTELLIGENT MOVEMENT SENSOR, LUX LEVEL SENSOR AND TIME SCHEDULE. (UNLESS OTHERWISE MENTIONED IN DRAWINGS) REFER TO SPECIFICATION FOR THE SYSTEM DETAILS.

2-ADDRESS MODULE AND HIGH FREQUENCY ELECTRONIC BALLAST SHALL BE PROVIDED FOR ALL LIGHT FIXTURES CONNECTED TO CENTRAL EMERGENCY BATTERY SYSTEM.

3-MAINTAINED ILLUMINANCE AT THE VARIOUS AREAS SHALL BE AS PER THE ELECTRICAL SPECIFICATION SECTION 16500. UNIFORMITY OF ILLUMINANCE, LIMITING GLARE INDEX, ETC. SHALL BE AS PER "CIBSE" RECOMMENDATIONS. CONTRACTOR SHALL PROVIDE ALL THE REQUIRED SUPPORTING CALCULATIONS BASED ON THE SELECTED LIGHT FIXTURES FOR COMPANY REVIEW AND APPROVAL.

4-ALL LUMINAIRE BALLAST SHALL BE HIGH FREQUENCY ELECTRONIC TYPE/DIMMABLE ELECTRONIC BALLAST EXCEPT FOR BATH ROOMS/STORES/ELEC. ROOMS SHALL BE POWER FACTOR CORRECTED TYPES.

5-DIMMING CONTROL SHALL BE PROVIDED IN MEETING ROOM, TEACHING ROOM, ... ect TO REDUCE LIGHTING LEVEL DURING PRESENTATIONS WHILE USING PROJECTORS. SYSTEM SHALL BE INTERFACE WITH AUDIO VISUAL SYSTEM TO ACHIEVE THE SAME.

6- FOR FINAL EXACT LOCATION OF THE LIGHTING FIXTURES, REFER TO THE REFLECTED CEILING LAYOUT PLANS

7- ALL ELECTRICAL INSTALLATIONS SHALL BE DONE ACCORDING TO ADDC REGULATIONS. ANY MODIFICATION REQUIRED TO FULFILL THE ADDC REQUIREMENTS SHALL BE DONE WITHOUT ANY COST IMPLICATION ON THE CONTRACT.

8- THE ROUTING SHOWN IN THE DRAWINGS ARE JUST FOR GUIDANCE, THE CONTRACTOR SHALL SELECT THE SUITABLE ROUTING FROM PANEL TO THE OUTLETS.

9- THE CONTRACTOR SHOULD PROVIDE THE REQUIRED AUXILIARY CONTACTS, ADDRESSIBLE MODULES REQUIRED FOR CONTROL AND MONITORING THE LIGHTING SYSTEM THROUGH THE BUILDING MANAGEMENT SYSTEM (BMS).

10- FINAL COLOR FOR THE WIRING DEVICES AND LIGHTING FIXTURES ACCESSORIES SHALL BE SUBJECT TO THE ENGINEER APPROVAL.

11- FINAL LOCATION AND EXIT SIGN PINTOGRAPH SHALL BE ACCORDING TO THE APPROVED FIRE ESCAPE ROUTING DRAWINGS

12-CORRIDORS, STAIRS, TOLITS AND ENTRANCE LIGHTING CONTROL WILL BE VIA BMS SYSTEM AND MANUAL OVERRIDED BY MEANS OF PANEL MOUNTED PUSH BUTTONS THROUGH CONTACTORS.

LEGEND:
LIGHTING

TYPE	SYMBOLS	DESCRIPTION
F1		RECESSED MOUNTED INDIRECT LIGHTING FIXTURE WITH WHITE PAINTED STEEL WITH MICRO SLOTS, OPAL POLYCARBONATE DIFFUSER SHEET (BEHIND) AND CENTRALLY PLACED ALUMINUM, 2x40W. COMPACT FLUORESCENT LAMP IP20.
		DITTO BUT CONNECTED TO EMERGENCY CIRCUITS.
		DITTO BUT CONNECTED TO CENTRAL BATTERY SYSTEM.
F2		RECESSED MOUNTED LIGHTING FIXTURE WITH WHITE PAINTED STEEL WITH SPECULAR AND SEMI-SPECULAR ALUMINUM WITH LOW IRIDESCENT FINISH LOUVER, WITH 4x18W. FLUORESCENT LAMP IP20.
		DITTO BUT CONNECTED TO EMERGENCY CIRCUITS.
		DITTO BUT CONNECTED TO CENTRAL BATTERY SYSTEM
F3		RECESSED MOUNTED LIGHTING FIXTURE WITH WHITE PRE COATED SHEET STEEL ,PRISMATIC DIFFUSER, 4x18W. FLUORESCENT LAMP IP54.
		DITTO BUT CONNECTED TO EMERGENCY CIRCUITS.
		DITTO BUT CONNECTED TO CENTRAL BATTERY SYSTEM.
F4		RECESSED MOUNTED EXPLOSION PROOF LUMINAIRE 2x36W FLUORESCENT LAMP, BODY MADE OF POLISHED SHEET STANLESS STEEL, RESISTANT AGAINST OIL VAPOR, EFFECT OFCHEMICALS, AND CLEANING AGENTS, WITH HARDENED BREAK-PROOF SAFETY GLASS IP 65
		DITTO BUT CONNECTED TO EMERGENCY CIRCUITS.
		DITTO BUT CONNECTED TO CENTRAL BATTERY SYSTEM
F5		SURFACE MOUNTED LIGHTING FIXTURE WITH DIE CAST ALUMINUM BODY AND OPAL POLYCARBONATE DIFFUSER WITH 2x26W COMPACT FLUORESCENT LAMP IP65. CONNECTED TO CENTRAL BATTERY SYSTEM.
F6		SURFACE MOUNTED LIGHTING FIXTURE WITH FIBER GLASS REINFORCED POLYESTER HOUSING WITH POLYCARBONATE PRISMATIC CLEAR COVER WITH 2x36W FLUORESCENT LAMP IP67.
		DITTO BUT CONNECTED TO EMERGENCY CIRCUITS.
		DITTO BUT CONNECTED TO CENTRAL BATTERY SYSTEM.
F7		SAME AS F6 BUT WALL MOUNTED.
		DITTO BUT CONNECTED TO EMERGENCY CIRCUITS.
		DITTO BUT CONNECTED TO CENTRAL BATTERY SYSTEM.
F8		RECESSED MOUNTED DOWN LIGHT WITH 1x13W COMPACT FLUORESCENT LAMP AND REMOTE GEAR BOX WITH GALVANIZED STEEL BODY, SPUN ALUMINUM WITH MATT ANODISED FINISH IP54
F9		RECESSED MOUNTED DOWN LIGHT WITH DIE CAST ALUMINUM BODY DEEP DRAWN LACQUERED SHEET STEEL CONTROL GEAR BOX WITH 1x26W COMPACT FLUORESCENT LAMP IP 20.
		DITTO BUT CONNECTED TO EMERGENCY CIRCUITS.
		DITTO BUT WITH CONNECTED TO CENTRAL BATTERY SYSTEM.
F10		SAME AS F9 BUT 2x26W.
		DITTO BUT CONNECTED TO EMERGENCY CIRCUITS.
		DITTO BUT CONNECTED TO CENTRAL BATTERY SYSTEM.
F11		RECESSED MOUNTED DOWN LIGHT WITH POLYESTER GEAR BOX, HIGH BRILLIANT FACETED METALLISED REFLECTOR WITH 1x13W COMPACT FLUORESCENT IP54.
		DITTO BUT CONNECTED TO EMERGENCY CIRCUITS.
		DITTO BUT CONNECTED TO CENTRAL BATTERY SYSTEM.
F12		WALL RECESSED STEP LIGHT, WITH 1x18W FLUORESCENT LAMP IP54
F13		SURFACE MOUNTED BULK HEAD WITH DIE CAST ALUMINUM BODY AND OPAL POLYCARBONATE DIFFUSER OVAL SHAP WITH 2X26W COMPACT FLUORESCENT LAMP IP 65.
F14		SINGLE SIDED ACRYLIC GLASS PANEL EXIT SIGN, WITH 8W COMPACT LAMP, CEILING/WALL MOUNTED, IP20.
F15		SAME AS F18 BUT DOUBLE SIDED TYPE.
F16		LINEAR/FLEXO COVE LIGHT WITH LOW XENON RIGID LAMPS, IP20, COMPLETE WITH ALL ACCESSORIES, TRANSFORMERS, .etc.
F17		SAME AS F3 BUT WITH 2x36 W.
		DITTO BUT CONNECTED TO EMERGENCY CIRCUITS.
		DITTO BUT CONNECTED TO CENTRAL BATTERY SYSTEM.
F18		RECESSED MOUNTED DOWN LIGHT WITH 2x42 w COMPACT FLUORESCENT LAMP WITH ALUMINIZED, MIRRORBRITE AND IRIDESCENT FREE REFLECTOR, IP20 CONNECTED TO EMERGENCY CIRCUITS.
		DITTO BUT CONNECTED TO CENTRAL BATTERY SYSTEM
F19		LIGHTING BOLLARD , 1x100W, 75cm INCANDESCENT LAMP IP44
F20		TRANSPARENT DIFFUSER LUMINAIRE HOUSING MADE OF POLYCARBONATE INJECTION MOULDED DIFFUSER MADE OF POLYCARBONATE WITH FLUORESCENT LAMP 2x36 W. IP65
		DITTO BUT CONNECTED TO EMERGENCY CIRCUITS.
		DITTO BUT CONNECTED TO CENTRAL BATTERY SYSTEM.

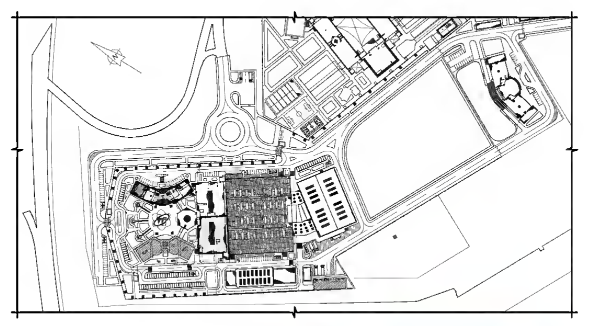
REFERENCE DRAWINGS	DWG NO.
LEGEND , GENERAL NOTES	E-03-001
GENERAL DETAILS (SHEET 1-2)	E-03-801
GENERAL DETAILS (SHEET 2-2)	E-03-802
LOW VOLTAGE SINGLE LINE DIAGRAM (SHEET 1-3)	E-03-901
LOW VOLTAGE SINGLE LINE DIAGRAM (SHEET 2-3)	E-03-902
LOW VOLTAGE SINGLE LINE DIAGRAM (SHEET 3-3)	E-03-903

REFLECTED CEILING LEGEND

- SOLID - CONCRETE BLOCK WALL
- HOLLOW - CONCRETE BLOCK WALL
- REINFORCED CONCRETE COLUMNS / SLABS
- SC1 - 600x600MM PLAIN METAL TILES
- SC2 - 600X600MM MINERAL FIBRE TILE
- SC3 - 300x300MM METAL TILES
- SC4 - 1200x300MM CHEMICAL RESISTANT METAL STRIPS
- CB - CEMENT BOARD 12MM THICKNESS
- CBS - CEMENT BOARD 12MM THICKNESS WITH CHEMICAL RESISTANT PAINT
- GP - GYPSUM BOARD CEILING 12.5MM THICK.
- SEP - CEMENT SAND PLASTER & SMOOTH EPOXY PAINT
- 300MM GYPSUM BOARD TO RECEIVE COVE LIGHT
- AKD - ALKYD ENAMEL PAINT SEMI GLOSS

LIGHTING SWITCHES
LEGEND:

TYPE	SYMBOLS	DESCRIPTION
S1		240V, 10A SINGLE POLE, ONE WAY, FLUSH MOUNTED LIGHTING SWITCH ONE GANG.
S2		SAME AS S1 BUT IP54.
S3		240V, 10A SINGLE POLE, ONE WAY, FLUSH MOUNTED LIGHTING SWITCH TWO GANG IP54.
S4		240V, 10A SINGLE POLE, ONE WAY, FLUSH MOUNTED LIGHTING SWITCH ONE GANG IP54.
S5		240V, 10A SINGLE POLE, TWO WAY, FLUSH MOUNTED LIGHTING SWITCH TWO GANG IP54.
S6		TOUCH SENSOR / PUSH BUTTON LETTERS INDICATES NO. OF GANGS.
S7		DIMMING PUSH BUTTON LETTERS INDICATES NO. OF GANGS.
	LCP	LIGHTING CONTROL PANEL



CLIENT :

ADNOC

أدنوك

شركة بترول أبوظبي الوطنية

G.F	M.F	K.S	M.N	M.N	ISSUED FOR ADDENDUM No.1	26/11/08	6
G.F	M.F	K.S	A.G	M.N	ISSUED FOR TENDER	13/11/08	0
PROJ TEAM APPROVED	JOB ENG	CHK	BY		REVISIONS	DATE	REV NO.

PROJECT :

BOROUGE INNOVATION CENTER
IN ABU DHABI
AGREEMENT NO:I15984DI - PROJECT NO.5984

END USER :

بروج Borouge

CONSULTANT :

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LABORATORY BUILDING

LIGHTING SYSTEM LAYOUT
PARTIAL GROUND FLOOR PLAN - PART 1

SCALE	JOB NO.	DWG NO.	REV NO.
1/100	1194	E-03-201	1

FILENAME